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(54) METHODS AND SYSTEMS FOR IMPROVED ABNORMALITY DETECTION IN MEDICAL IMAGING DATA

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(57) **ABSTRACT**

In an method for training artificial intelligence entities (AIE) for abnormality detection, medical imaging data of the human organ is provided as training data having training samples, the medical imaging data including imaging results from different types of imaging techniques for each training sample of the training data, a pre-trained or randomly initialized AIE is provided, and the AIE is trained using the provided training samples. The training may include, for at least one training sample, a first loss function for a sub-structure of the AIE is calculated independently of a first spatial region of the human organ, and, for a training sample, a second loss function for a sub-structure of the AIE is calculated independently of a second spatial region of the human organ. The AIE may be trained using the calculated first loss function and the calculated second loss function.